

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

July 19, 2005

TO: Internal File

THRU: D. Wayne Hedberg, Permit Supervisor

THRU: Steve Fluke, Team Lead

FROM: Priscilla Burton, Environmental Scientist III

RE: SITLA Muddy Lease Amendment, Canyon Fuel Company, LLC., SUFCO Mine, C/041/0002, Task ID #2157

SUMMARY:

School and Institutional Trust Lands Administration (SITLA) Lease ML-49443, referred to as the SITLA Muddy Tract, adds 2,134.19 acres to the existing, 24,632.95 acre permit area, making a new total of 26,767.14 acres in the permit area. The United States owns the surface and the Forest Service (Manti-LaSal District) is the land managing agency within lease ML-9443. There is no surface disturbance anticipated within the Muddy Tract.

Plate 5-6 shows the location of lease ML 49443, which includes land within Sections 4, 5, 7, 8, and 9 of T. 21 S., R.5 E. The coal identified in the lease lies beneath Big Ridge portrayed on the intersection of the following 7.5minute quadrangle maps: Heliotrope Mountain, Flagstaff Peak, Acord Lakes and Emery West.

The amendment does not include chemical analysis of the roof and floor of the coal. This information along with minor editing to the proposal must be addressed prior to approval.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

General Chapter 1 volume contains information on corporate ownership for SUFCO and affiliated Utah mines: Soldier Canyon Mine, Banning Loadout, and Dugout Canyon Mines. (Section 111 of the MRP). (At the Division, General Chapter 1 has been filed with the C/007/0018 Soldier Canyon Mine MRP.)

Section 112.400 of the MRP and Table 1-1 and Figure 1 of General Chapter 1 provide a listing of affiliated coal mining operations under the control Arch Coal Co. and subsidiaries. The affiliated Utah mines are Skyline Mine, Soldier Canyon Mine, Banning Loadout, Dugout Canyon Mine, Gordon Creek No. 2, 7, and 8, Gordon Creek No. 3 and 6, and Huntington Canyon No. 4 mine.

Findings:

The information provided meets the requirements of the Regulations.

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

Section 113 of the MRP indicates that a current listing of violation information is provided in the General Chapter 1 volume for Utah affiliated mines (filed at the Division with the Soldier Canyon Mine MRPC/007/018).

Findings:

The information provided meets the requirements of the Regulations.

RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

Analysis:

Lease agreement ML-49443 between the State of Utah and Ark Land Coal Company and Arch Coal Co. is included in Appendix 1-2 and provides the right of entry for coal in the Upper Hiawatha coal zone within the Blackhawk formation.

The location of the Muddy Tract is shown on Plate 5-6, Land Ownership and Permit Area Map. Legal descriptions for ML-49443 are provided in Section 114 of the MRP.

Findings:

The information provided is not clear. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-121.200, Section 112.500 of the application must indicate that the Lessee for SITLA Lease ML-49443 is Ark Land Company and Arch Coal Inc.; Cityplace One, Suite 300; St. Louis MO 63141

LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

Analysis:

The land described by lease ML-49443 lies within the Manti-LaSal National Forest. Plate 5-6 shows the location of lease ML 49443, which includes land within Sections 4, 5, 7, 8, and 9 of T. 21 S., R.5 E. The coal identified in the lease lies beneath Big Ridge portrayed on the intersection of the following 7.5minute quadrangle maps: Heliotrope Mountain, Flagstaff Peak, Acord Lakes and Emery West. There are no cemeteries, occupied dwellings or maintained public roads within the lease. Section 4.1.1.1 describes previous study of the roadless Muddy Tract area for wilderness designation, but no wilderness designation was made. There are no lands currently under study or administrative proceedings for unsuitability claims.

Findings:

The available information meets the requirements of the Regulations.

TECHNICAL MEMO

PERMIT TERM

Regulatory References: 30 CFR 778.17; R645-301-116.

Analysis:

The most recent permit for SUFCO was issued on May 20, 2002 and will expire on May 20, 2007.

Findings:

The information available meets the requirements of the Regulations.

PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

Analysis:

This amendment is not considered a significant revision and therefore, no public notice was required.

Findings:

The information presented meets the requirements of the Regulations.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

Analysis:

School and Institutional Trust Lands Administration (SITLA) Lease ML-49443, referred to as the SITLA Muddy Tract, adds 2,134.19 acres to the existing, 24,632.95 acre permit area, making a new total of 26,767.14 acres in the permit area (Section 116 of the MRP).

Findings:

Information provided meets the requirements of the Regulations.

CLIMATOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.18; R645-301-724.

Analysis:

Soil descriptions for Big Ridge in SITLA lease ML-49443 indicate that the area receives between 20 – 30 inches of precipitation.

Findings:

The information provided meets the requirements of the Regulations.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

There is no planned surface disturbance associated with the SITLA Lease ML-49443. An Order III level soil survey was included in the application to provide general reconnaissance information about the surface. Soil types are described in Appendix 2-10. The major soil taxonomic order is Mollisol, reflecting the rich, deep soils on pediment terraces.

Prior to any surface disturbing activity, an Order I soil survey must be conducted of the proposed disturbed area.

TECHNICAL MEMO

Findings:

The information provided meets the requirements of the Regulations, since there is no surface disturbance. However, should circumstances change, an Order I soil survey must be conducted prior to any surface disturbance.

LAND-USE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.22; R645-301-411.

Analysis:

Land use within the SITLA lease ML-49443 is described in Section 4.1.1.1 and illustrated on Plate 4-1b. The land is within the Manti-LaSal National Forest. The land is managed for big game range and forage. Other existing land uses are described in Section 4.1.1.1 as timber production, livestock grazing, wildlife habitat, recreation and associated travel on forest development roads.

The SITLA Muddy tract is within the Emery C & H grazing allotment, supporting 1,387 head of cattle. Stock is watered at springs, streams, and ponds (see State Appropriated Water Rights, Hydrologic Resource Information section of this TA for more discussion).

Forest users include recreational visitors and hunters with the highest use in the fall during the deer and elk hunts. Forest development roads provide access to the lease area for foot traffic, bicycle, horse, ATV and snowmobile etc.

Findings:

Information provided does not meet the clear and concise requirements of the Regulations. Prior to approval, the Permittee must provide the following, in accordance with:

R645-301-121.200, The plan states in Section 4.1.1.1 that one of the premining land uses of the area within State lease ML-49443 is “transportation corridor.” The next two paragraphs describe the study of roadless areas in the Muddy Tract. The premining land use section must be re-written:

- (1) To provide a clear indication of the existing traffic in the transportation [travel or access] corridor by vehicle type and frequency
- (2) To indicate the condition of the road in language consistent with forest management direction i.e. Level 1, 2 or 3 roads.

- (3) To state the author and date of the re-inventory of the roadless areas as well as the location of the roadless areas in relation to the transportation corridor and the lease boundary.

R645-301-121.200, The legend on Plate 4-1b, Land Uses – Pines and SITLA Muddy Tract must be improved as it is difficult to understand, since the same abbreviations are used for different meanings in the two lease areas.

PRIME FARMLAND

Regulatory Reference: 30 CFR 785.16, 823; R645-301-221, -302-270.

Analysis:

Section 2.2.1 discusses the prime farmland status of the permit area.

Order III level soil survey information was included in the application to provide general reconnaissance information about the surface within SITLA lease ML-49443. Plate 2-3 Soil Types SITLA Muddy Tract shows four soils within the ML-49443 lease area, at elevations from 8400 to 9000 ft. Soil types are described in Appendix 2-10. The major soil taxonomic order is Mollisol, reflecting the rich, deep soils on pediment terraces. The temperature regime for all is frigid. There are no irrigated lands. Plate 4-1b indicates that the land is currently used as open range.

Findings:

The Division finds that there are no prime farmlands within the SITLA lease ML-49443. However, information provided does not meet the clear and concise requirements of the Regulations. Prior to approval, the Permittee must provide the following, in accordance with:

R645-301-121.200, Provide an accurate 30 CFR citation in section 2.2.1 of the MRP or reword the statement without using the citation.

OPERATION PLAN

SPOIL AND WASTE MATERIALS

TECHNICAL MEMO

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Coal Mine Waste

The application indicates in Section 5.2.2 that sand channels exist in the lease area. The amount of waste rock to be brought to the surface was not estimated.

Refuse Piles

Certification of the refuse piles is provided to the Division quarterly (not in the Annual Reports), but volume of refuse hauled to the site is not disclosed with the quarterly inspections.

The MRP indicates the waste rock site will be contemporaneously reclaimed and that the initial cell will cover 4.5 acres (Section 3.4, Vol. 3). Section 3.3 and Map 4 of Volume 3 should be revised to illustrate the current status of reclaimed, active and topsoil salvage areas at the refuse site.

Findings:

The information provided in Section 2.3.1.1 of the MRP should be updated in accordance with:

- 645-301-121.100, •Section 3.3 and Map 4 of Volume 3 should be revised to illustrate the current status of reclaimed, active and topsoil salvage areas at the refuse site and the current volume of waste stored at the refuse site to date must be indicated. •
- Current volume of waste stored at the refuse site should be included in the MRP.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Acid- and Toxic-Forming Materials and Underground Development Waste

The application does not provide any chemical analysis of from the borings within the SITLA lease ML-49443.

Findings:

The information provided does not meet the requirements of the Regulations. Prior to approval, the Permittee must provide the following information, in accordance with:

R645-301-624.320, The application must include chemical analyses of the roof and floor of the Upper Hiawatha coal seam for the parameters listed in Table 6 of the 1988 Guidelines for the Management of Topsoil and Overburden.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

General

The current bond \$4,439,000 dollars.

Form of Bond

The surety bond is through St. Paul Fire and Marine Insurance Company.

Determination of Bond Amount

Recently, the Division evaluated the reclamation costs for the SUFCO Mine in the event of bond forfeiture. Costs were estimated at \$2,616,000 in 2009 dollars (see 2278WHW.doc, July 13, 2005). The amount of bond in excess of the required amount is \$1,823,000.

Terms and Conditions for Liability Insurance

The most recent liability insurance information is found in Appendix 1-2 of General Chapter 1 volume.

Findings:

The information provided meets the requirements of the Regulations.

TECHNICAL MEMO

RECOMMENDATIONS:

The amendment does not include chemical analysis of the roof and floor of the coal. This information along with minor editing to the proposal must be addressed prior to approval.

O:\041002.CON\FINAL\WG2157\pwb2157.doc